

REMARKS

In the Office Action, the Examiner rejected claims 1-45. By this paper, Applicant canceled claims 1-45 and added new claims 46-90. These new claims do not add any new matter. In view of the foregoing amendments and the following remarks, Applicant respectfully requests allowance of all pending claims.

Rejections Under 35 U.S.C. § 112, second paragraph

In the Office Action, the Examiner rejected claims 1-13 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant respectfully traverses this rejection. As set forth above, the Applicant canceled claims 1-13. For this reason, Applicant respectfully requests the Examiner to withdraw the rejection of claims 1-13 under 35 U.S.C. § 112, second paragraph.

Rejections Under 35 U.S.C. § 102

In the Office Action, the Examiner rejected claims 1-5 and 7-45 under 35 U.S.C. § 102(e) as anticipated by Bausch et al. (U.S. Patent No. 6,304,824 B1) (hereinafter Bausch). Again, the Applicant canceled claims 1-5 and 7-45, thereby rendering this rejection moot. Accordingly, the Applicant respectfully requests the Examiner to withdraw the rejection of claims 1-5 and 7-45 under 35 U.S.C. § 102(e). However, the Applicant addresses the new claims below.

Legal Precedent

First, Applicants remind the Examiner that, during patent examination, the pending claims must be given an interpretation that is reasonable and consistent with the specification. *See In re Prater*, 415 F.2d 1393, 1404-05, 162 U.S.P.Q. 541, 550-51 (C.C.P.A. 1969); *see also In re Morris*, 127 F.3d 1048, 1054-55, 44 U.S.P.Q.2d 1023, 1027-28 (Fed. Cir. 1997); *see also* M.P.E.P. §§ 608.01(o) and 2111. Interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach. *See In re Cortright*, 165 F.3d 1353, 1359, 49 U.S.P.Q.2d 1464, 1468 (Fed. Cir. 1999); *see also* M.P.E.P. § 2111. As further explained in Section 2111.01 of the M.P.E.P., the words of the claim must be given

their plain meaning unless the applicant has provided a clear definition in the specification. *See In re Zletz*, 893 F.2d 319, 321, 13 U.S.P.Q.2d 1320, 1322 (Fed. Cir. 1989). Again, the plain meaning refers to an interpretation by those of ordinary skill in the art. *See In re Sneed*, 710 F.2d 1544, 218 U.S.P.Q. 385 (Fed. Cir. 1983).

Second, anticipation under section 102 can be found only if a single reference shows exactly what is claimed. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 U.S.P.Q. 773 (Fed. Cir. 1985). For a prior art reference to anticipate under section 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). To maintain a proper rejection under section 102, a single reference must teach each and every limitation of the rejected claim. *Atlas Powder v. E.I. du Pont*, 750 F.2d 1569 (Fed. Cir. 1984). Accordingly, the Applicants need only point to a single element not found in the cited reference to demonstrate that the cited reference fails to anticipate the claimed subject matter. The prior art reference also must show the *identical* invention “*in as complete detail as contained in the . . . claim*” to support a *prima facie* case of anticipation. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989).

Third, if the Examiner relies on a theory of inherency, the extrinsic evidence must make clear that the missing descriptive matter is *necessarily* present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. *In re Robertson*, 169 F.3d 743, 49 U.S.P.Q.2d 1949 (Fed. Cir. 1999) (Emphasis Added). The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient. *Id.* In relying upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic *necessarily* flows from the teachings of the applied prior art. *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). The Examiner, in presenting the inherency argument, bears the evidentiary burden and must adequately satisfy this burden. *See id.* Regarding functional limitations, the Examiner must evaluate and consider the functional limitation, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used. *See*

M.P.E.P. § 2173.05(g); *In re Swinehart*, 169 U.S.P.Q. 226, 229 (C.C.P.A. 1971); *In re Schreiber*, 44 U.S.P.Q.2d 1429, 1432 (Fed. Cir. 1997). If the Examiner believes the functional limitation to be inherent in the cited reference, then the Examiner “must provide some evidence or scientific reasoning to establish the reasonableness of the examiner’s belief that the functional limitation is an inherent characteristic of the prior art.” *Ex parte Skinner*, 2 U.S.P.Q.2d 1788, 1789 (Bd. Pat. App. & Inter. 1986).

Fourth, the *drawings* of the cited reference must be evaluated for what they *reasonably disclose and suggest* to one of ordinary skill in the art. *In re Aslanian*, 590 F.2d 911, 200 U.S.P.Q. 500 (CCPA 1979).

Omitted Features from Independent Claim 46

Independent claim 46 recites, *inter alia*, “obtaining a plurality of operating parameters *including operating temperature and operating load* of an integrated circuit; analyzing the plurality of operating parameters to provide a target voltage that *substantially minimizes power consumption and that simultaneously maintains a substantially constant operating frequency*.”

In contrast, the Bausch reference does not teach or suggest these features, but rather Bausch et al. disclose sensing the effective channel mobility of an integrated circuit using a temperature measurement. *See* Bausch et al., Col. 7, lines 8-13. Moreover, Bausch et al. disclose *either* maximizing operating speed, minimizing power consumption, extending the range of operating temperature, *or* increasing the operational reliability of the integrated circuit. *See* Bausch et al., Abstract, Summary, Col. 5, lines 30-41; Col. 6, lines 24-29.

In view of these deficiencies, independent claim 46 and dependent claims 47-55 are believed to be patentable over the Bausch reference.

Omitted Features from Independent Claim 56

Independent claim 56 recites, *inter alia*, “sensing an operating temperature ...; detecting *another operating parameter* of the integrated circuit; and analyzing ... to provide a

target voltage that *substantially reduces power consumption without substantially altering operating frequency* of the integrated circuit.”

In sharp contrast to the foregoing claim features, Bausch et al. disclose sensing the effective channel mobility of an integrated circuit using a temperature measurement. *See* Bausch et al., Col. 7, lines 8-13. Moreover, Bausch et al. disclose *either* maximizing operating speed, minimizing power consumption, extending the range of operating temperature, *or* increasing the operational reliability of the integrated circuit. *See* Bausch et al., Abstract, Summary, Col. 5, lines 30-41; Col. 6, lines 24-29.

In view of these deficiencies, independent claim 56 and dependent claims 57-62 are believed to be patentable over the Bausch reference.

Omitted Features from Independent Claim 63

Independent claim 63 recites, *inter alia*, “sensing at least one parameter including a *non-temperature operating parameter* ...; and analyzing an operational relationship between the at least one parameter, voltage, and frequency to determine a target voltage that *substantially minimizes power consumption and that simultaneously holds a substantially uniform operating frequency* of the integrated circuit.”

As discussed above, the Bausch reference does not teach or suggest these features, but rather Bausch et al. disclose sensing the effective channel mobility of an integrated circuit using a temperature measurement. *See* Bausch et al., Col. 7, lines 8-13. Moreover, Bausch et al. disclose *either* maximizing operating speed, minimizing power consumption, extending the range of operating temperature, *or* increasing the operational reliability of the integrated circuit. *See* Bausch et al., Abstract, Summary, Col. 5, lines 30-41; Col. 6, lines 24-29.

In view of these deficiencies, independent claim 63 and dependent claims 64-67 are believed to be patentable over the Bausch reference.

Omitted Features from Independent Claim 68

Independent claim 68 recites, *inter alia*, “providing a control system configured to analyze an operational relationship between a ***sensed operating temperature***, a ***sensed operating parameter***, an operating voltage, and an operating frequency to provide a target voltage that *substantially minimizes power consumption and that simultaneously maintains a substantially constant operating frequency* of the integrated circuit.”

In contrast to these claims features, Bausch et al. disclose sensing the effective channel mobility of an integrated circuit using a temperature measurement. *See* Bausch et al., Col. 7, lines 8-13. Moreover, Bausch et al. disclose *either* maximizing operating speed, minimizing power consumption, extending the range of operating temperature, *or* increasing the operational reliability of the integrated circuit. *See* Bausch et al., Abstract, Summary, Col. 5, lines 30-41; Col. 6, lines 24-29.

In view of these deficiencies, independent claim 68 and dependent claims 69-76 are believed to be patentable over the Bausch reference.

Omitted Features from Independent Claim 77

Independent claim 77 recites, *inter alia*, “at least one sensor configured to obtain an indicator of at least one ***non-temperature operating parameter*** of the integrated circuit; and a controller ... configured to analyze an operational relationship between the at least one non-temperature operating parameter, an operating voltage, and an operating frequency to provide the power supply with a target voltage that *substantially minimizes power consumption and that simultaneously maintains a substantially constant operating frequency* of the integrated circuit.”

Again, the Bausch reference does not teach or suggest these features, but rather Bausch et al. disclose sensing the effective channel mobility of an integrated circuit using a temperature measurement. *See* Bausch et al., Col. 7, lines 8-13. Moreover, Bausch et al. disclose *either* maximizing operating speed, minimizing power consumption, extending the

range of operating temperature, *or* increasing the operational reliability of the integrated circuit. *See* Bausch et al., Abstract, Summary, Col. 5, lines 30-41; Col. 6, lines 24-29.

In view of these deficiencies, independent claim 77 and dependent claims 78-85 are believed to be patentable over the Bausch reference.

Omitted Features from Independent Claim 86

Independent claim 86 recites, *inter alia*, “*code* is configured to analyze an operational relationship between at least one *non-temperature operating parameter*, an operating voltage, and an operating frequency to provide a power supply with a target voltage that *substantially minimizes power consumption and that simultaneously maintains a substantially constant operating frequency* of an integrated circuit.”

As discussed above, the Bausch reference does not teach or suggest these features, but rather Bausch et al. disclose sensing the effective channel mobility of an integrated circuit using a temperature measurement. *See* Bausch et al., Col. 7, lines 8-13. Moreover, Bausch et al. disclose *either* maximizing operating speed, minimizing power consumption, extending the range of operating temperature, *or* increasing the operational reliability of the integrated circuit. *See* Bausch et al., Abstract, Summary, Col. 5, lines 30-41; Col. 6, lines 24-29.

In view of these deficiencies, independent claim 86 and dependent claims 87-90 are believed to be patentable over the Bausch reference.

Request Withdrawal of Claim Rejections

For the reasons provided above, the Applicant respectfully requests the Examiner withdraw all outstanding rejections under 35 U.S.C. § 102.

Rejections Under 35 U.S.C. 103(a)

In the Office Action, the Examiner rejected claim 6 under 35 U.S.C. § 103(a) as unpatentable over Bausch et al. (U.S. Patent No. 6,304,824 B1) (hereinafter Bausch). In the alternative, the Examiner rejected claim 6 under 35 U.S.C. § 103(a) as unpatentable over Horden et al. (U.S. Patent No. 5,812,860) (hereinafter Horden). As discussed above, the Applicant canceled claim 6. However, to the extent that it pertains to the new claims, the Applicant addresses the Examiner's rejection in detail below.

Specifically, the Examiner rejected claim 6 over Bausch or Horden, in the alternative, stating that these references do not specifically teach searching a *control table or lookup table* for the desired supply based on the monitor parameter. However, the Examiner took Official Notice that "it is both known and expected in the art to use a control table (or lookup table) when adjusting an output based on a monitored parameter." See Paper No. 3, p. 13.

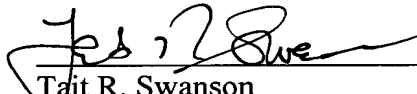
The Examiner has taken Official Notice of facts outside of the record that the Examiner apparently believes are capable of demonstration as being "well-known" in the art. Therefore, in accordance with M.P.E.P. § 2144.03, the Applicant hereby seasonably traverses and challenges the Examiner's use of Official Notice. Specifically, the Applicant respectfully requests that the Examiner produce evidence in support of the Examiner's position as soon as practicable during prosecution and that the Examiner add a reference to the rejection in the next Official Action. If the Examiner finds such a reference and applies it in combination with the Bausch and/or Horden references, the Applicant further requests that the Examiner specifically identify the portion of the newly cited reference that discloses the allegedly "well known" elements of the instant claims, as discussed above, or withdraw the rejection.

Conclusion

The Applicant respectfully submits that all pending claims should be in condition for allowance. However, if the Examiner believes certain amendments are necessary to clarify the present claims or if the Examiner wishes to resolve any other issues by way of a telephone conference, Applicant kindly invites the Examiner to contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,

Date: March 3, 2004


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